

=> FILE REG

FILE 'REGISTRY' ENTERED AT 16:00:33 ON 06 AUG 2004  
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STRUCTURE FILE UPDATES: 4 AUG 2004 HIGHEST RN 722454-60-6  
DICTIONARY FILE UPDATES: 4 AUG 2004 HIGHEST RN 722454-60-6

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when  
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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
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=> FILE HCAPLU

FILE 'HCAPLUS' ENTERED AT 16:00:40 ON 06 AUG 2004  
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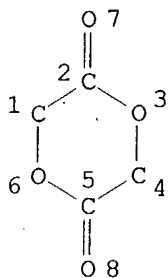
FILE COVERS 1907 - 6 Aug 2004 VOL 141 ISS 6  
FILE LAST UPDATED: 4 Aug 2004 (20040804/ED)

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> D QUE

L15 STR

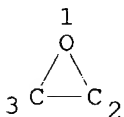
*structure 1*



NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE  
 L16 STR 2



*217 polymers from structure 1 and 2 query*

NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RSPEC I  
 NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE  
 L17 STR

Cb^Ak^Cb  
 1 2 3

*← Subset search with this query*

NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE

L19 SCR 2043

L22 217 SEA FILE=REGISTRY SSS FUL L15 AND L16 AND L19

L24 7 SEA FILE=REGISTRY SUB=L22 SSS FUL L17

L26 5 SEA FILE=HCAPLUS ABB=ON L24

*7 polymers*

*← 5 CA references*

=> D L26 ALL 1-5 HITSTR

L26 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2003:946275 HCAPLUS  
 DN 140:146610  
 ED Entered STN: 05 Dec 2003  
 TI Terpolymers from Lactide and Bisphenol A Derivatives: Introducing Renewable Resource Monomers into Commodity Thermoplastics *applicant*  
 AU Abayasinghe, Nilmini K.; Smith, Dennis W., Jr.  
 CS Department of Chemistry and Center for Advanced Engineering Fibers and Films, Clemson University, Clemson, SC, 29634, USA  
 SO Macromolecules (2003), 36(26), 9681-9683  
 CODEN: MAMOBX; ISSN: 0024-9297  
 PB American Chemical Society  
 DT Journal  
 LA English  
 CC 35-7 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 37  
 AB Here we report the first synthesis of terpolymers of L-lactide (LA), with commodity monomers such as 4,4'-hexafluoroisopropylidenediphenol (6F-Bis-A) and the diglycidyl ether of bisphenol A (DGEBA) using metal halide-crown ether complexes. Terpolymn. of LA, 6F-Bis-A, and DGEBA gave novel high mol. weight poly(ester hydroxy ether)s containing isolated lactide units. This method may be applicable to the development of new commodity thermoplastics containing a significant content of renewable resource material.  
 ST lactide hexafluoroisopropylidenediphenol bisphenol A diglycidyl ether copolymn  
 IT Polyethers, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (epoxy-polyester-, fluorine-containing; terpolymers from lactide and bisphenol A derivs.)  
 IT Polyethers, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (epoxy-polyester-; terpolymers from lactide and bisphenol A derivs.)  
 IT Fluoropolymers, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (epoxy-polyester-polyether-; terpolymers from lactide and bisphenol A derivs.)  
 IT Polyesters, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (epoxy-polyether-, fluorine-containing; terpolymers from lactide and bisphenol A derivs.)  
 IT Polyesters, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (epoxy-polyether-; terpolymers from lactide and bisphenol A derivs.)  
 IT Fluoropolymers, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (epoxy; terpolymers from lactide and bisphenol A derivs.)  
 IT Epoxy resins, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (fluorine-containing; terpolymers from lactide and bisphenol A derivs.)  
 IT Glass transition temperature  
 Polymer chains  
 (of terpolymers from lactide and bisphenol A derivs.)  
 IT Solvent effect  
 (on terpolymers from lactide and bisphenol A derivs.)  
 IT Epoxy resins, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (polyester-polyether-, fluorine-containing; terpolymers from lactide and

bisphenol A derivs.)

IT Epoxy resins, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (polyester-polyether-; terpolymers from lactide and bisphenol A  
 derivs.)

IT Polymerization  
 (solution; terpolymers from lactide and bisphenol A derivs.)

IT 770-35-4, 1-Phenoxy-2-propanol  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (Dowanol; solvent effect on synthesis of terpolymers from lactide and  
 bisphenol A derivs.)

IT 4511-42-6, L-Lactide  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (in attempted copolymn with hexafluoroisopropylidenediphenol)

IT 1478-61-1, 4,4'-Hexafluoroisopropylidenediphenol  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (in attempted copolymn with L-lactide)

IT 97-64-3, Ethyl lactate 108-88-3, Toluene, uses 111-96-6, Diglyme  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (solvent effect on synthesis of terpolymers from lactide and bisphenol  
 A derivs.)

IT 7447-40-7, Potassium chloride, uses 17455-13-9, 18-Crown-6  
 RL: CAT (Catalyst use); USES (Uses)  
 (terpolymers from lactide and bisphenol A derivs.)

IT 651031-63-9P 651031-64-0P 651031-65-1P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (terpolymers from lactide and bisphenol A derivs.)

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Albertsson, A; Acta Polym 1995, V46, P114 HCAPLUS
- (2) Anderson, K; J Appl Polym Sci 2003, V89, P3757 HCAPLUS
- (3) Anon; [http://www.oit.doe.gov/agriculture/pdfs/technology\\_roadmap.pdf](http://www.oit.doe.gov/agriculture/pdfs/technology_roadmap.pdf)
- (4) Aubrecht, K; Macromolecules 2002, V35, P644 HCAPLUS
- (5) Chamberlain, B; Macromolecules 1999, V32, P2400 HCAPLUS
- (6) Drumright, R; Adv Mater 2000, V12, P1841 HCAPLUS
- (7) Frick, M; Biomacromolecules 2003, V4, P216
- (8) Gross, R; Science 2002, V297, P803 HCAPLUS
- (9) Lindblad, M; Adv Polym Sci 2002, V157, P139 HCAPLUS
- (10) Nishikubo, T; J Polym Sci, Part A: Polym Chem 1989, V27, P1975 HCAPLUS
- (11) Nishikubo, T; Prog Polym Sci 1993, V18, P963 HCAPLUS
- (12) Ovitt, T; J Am Chem Soc 1999, V121, P4072 HCAPLUS
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- (14) Pasquale, A; Macromolecules 2001, V34, P8064 HCAPLUS
- (15) Radano, C; J Am Chem Soc 2000, V122, P1552 HCAPLUS
- (16) Westervelt, R; Chem Week 2000, V162, P9
- (17) Yashiro, T; Macromolecules 2001, V34, P3205 HCAPLUS

IT 651031-63-9P 651031-65-1P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (terpolymers from lactide and bisphenol A derivs.)

RN 651031-63-9 HCAPLUS

CN 1,4-Dioxane-2,5-dione, 3,6-dimethyl-, (3S,6S)-, polymer with  
 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane] and  
 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (9CI) (CA  
 INDEX NAME)

CM 1

CRN 4511-42-6

CMF C6 H8 O4